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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,579	01/18/2002	Atsuhito Noda	A1-212 US	8662

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MOLEX INCORPORATED
2222 WELLINGTON COURT
LISLE, IL 60532

EXAMINER

LEON, EDWIN A

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 05/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,579

Applicant(s)

NODA, ATSUHITO

Examiner

Edwin A. León

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2003 and 16 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 10 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and Request for Continued Examination filed March 17, 2003 and April 16, 2003 in which Claims 1, 4, 9, 13, and 16 have been amended, has been placed of record in the file as Papers No. 9 and 11, respectively.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beshears (U.S. Patent No. 6,079,986) in view of Carlton (U.S. Patent No. 5,120,258). With regard to Claims 1, 4 and 16, Beshears discloses a coaxial connector comprising a coaxial plug (40), the coaxial plug (40) includes a plug main body (14,60) made of an insulative resin, and having a surface (front surfaces of 14,60) and a plurality of terminals (42,72,74) protruding from the surface (front surfaces of 14,60) of the plug main body (14,60); and the terminals (42,72,74) are divided into one signal

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terminal (72,42) and a plurality of ground terminals (74) disposed around the signal terminal (72,42), the signal terminal (72,42) is disposed at a central portion of a planar surface (where 14 is located) to be protruded from the planar surface (where 14 is located), and the ground terminals (74) are disposed around the signal terminal (72,42), and a coaxial receptacle (14) electrically connected to the coaxial plug (40) by inserting the terminals (42,72,74) therein. See Figs. 13-17.

Beshears doesn't show the surface being planar and the coaxial plug provided at an end of a cable.

Carlton discloses a plug main body (10) having a planar surface (bottom of 12) from which a plurality of pin type terminals (14,16) protrude, the pin type terminals (14,16) being divided into one signal terminal (16) and a plurality of ground terminals (14) disposed around the signal terminal (16) and the plug (10) being provided at an end of a cable (75). See Figs. 1-2.

Thus, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the coaxial connector of Beshears making the surface a planar surface and the plug being provided at an end of a cable as taught in Carlton to make the connector suitable for circuit boards having both signals and ground in the same board and systems using coaxial cables.

With regard to Claim 2, Beshears discloses the ground terminals (74) being arranged such that distances between adjacent ground terminals (74) are set to be equal to one another. See Figs. 16-17.

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With regard to Claim 3, Beshears discloses the ground terminals (74) being arranged such that distances from the signal terminal (72,42) to the ground terminals (74) are set to be equal to one another. See Figs. 16-17.

With regard to Claim 5, Beshears discloses two of the ground terminals (74) being provided, which are disposed to be point-symmetric with respect to the signal terminal (72,42). See Figs. 16-17.

With regard to Claim 6, Beshears discloses three of the ground terminals (74) being provided, which are disposed at respective apex positions of a regular triangle centered by the signal terminal (72,42). See Figs. 16-17.

With regard to Claim 7, Beshears discloses four of the ground terminals (74) being provided, which are disposed at respective corner portions of a regular square centered by the signal terminal (72,42). See Figs. 16-17.

With regard to Claim 8, Beshears discloses eight of the ground terminals (74) being provided, which are respectively disposed at corner portions of a regular square centered by the signal terminal (72,42) and at longitudinal middle points of sides of the regular square. See Figs. 16-17.

With regard to Claim 11, Beshears discloses the terminals (42,72,74) being perpendicular to the surface (front surfaces of 14,60). See Figs. 16-17.

With regard to Claim 12, Beshears discloses the terminals (42,72,74) being pin type. See Figs. 16-17.

With regard to Claim 13, Beshears discloses a coaxial plug (40) comprising: a plug main body (14,60) made of an insulative resin and having a surface (front surfaces

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of 14,60), and a plurality of pin type terminals (42,72,74) protruding from a surface (front surfaces of 14,60) of the plug main body (14,60), the pin type terminals (42,72,74) being divided into one signal terminal (42,72) and a plurality of ground terminals (74) disposed around the signal terminal (42,72), the signal terminal (42,72) being separated from the ground terminals (74) solely by the insulative resin. See Figs. 13-17.

Beshears doesn't show the surface being planar.

Carlton discloses a plug main body (10) having a planar surface (bottom of 12) from which a plurality of pin type terminals (14,16) protrude, the pin type terminals (14,16) being divided into one signal terminal (16) and a plurality of ground terminals (14) disposed around the signal terminal (16). See Figs. 1-2.

Thus, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the coaxial connector of Beshears making the surface a planar surface as taught in Carlton to make the connector suitable for circuit boards having both signals and ground in the same board.

With regard to Claim 14, Beshears discloses the ground terminals (74) being arranged such that distances between adjacent ground terminals (74) are set to be equal to one another. See Figs. 13-17.

With regard to Claim 15, Beshears discloses the ground terminals (74) being arranged such that distances from the signal terminal (42,72) to the ground terminals (74) are set to be equal to one another. See Figs. 13-17.

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With regard to Claim 17, Beshears discloses two of the ground terminals (74) being provided, which are disposed to be point-symmetric with respect to the signal terminal (42,72). See Figs. 13-17.

With regard to Claim 18, Beshears discloses three of the ground terminals (74) being provided, which are disposed at respective apex positions of a regular triangle centered by the signal terminal (42,72). See Figs. 13-17.

With regard to Claim 19, Beshears discloses four of the ground terminals (74) being provided, which are disposed at respective corner portions of a regular square centered by the signal terminal (42,72). See Figs. 13-17.

With regard to Claim 20, Beshears discloses eight of the ground terminals (74) being provided, which are respectively disposed at corner portions of a regular square centered by the signal terminal (42,72) and at longitudinal middle points of sides of the regular square. See Figs. 13-17.

Allowable Subject Matter

4. Claims 9-10 are allowed for the reasons stated in the Office action of January 13, 2003.

Response to Arguments

5. Applicant's arguments filed March 17, 2003 have been fully considered but they are not persuasive. In response to Applicant's arguments regarding Claims 1 and 13 that the Beshears reference doesn't show the terminals protruding from a planer surface of the plug body, Applicant is reminded that this limitation has been newly added. However, it is the Examiner's opinion that one with ordinary skill in the art would modify the coaxial connector of Beshears by making the surface a planar surface as taught in Carlton to make the connector suitable for circuit boards having both signals and ground in the same board.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (703) 308-6253. The examiner can normally be reached on Monday - Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

EAL
Edwin A. Leon
AU 2833

EAL
April 29, 2003

P. Bradley
P. AUSTIN BRADLEY
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